



Dart Hawkesbury
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D407-667-205RLC

Job Sheet 167710



Part No: D407-667-205RLC

Job Qty: 1 ea

Part Name: Aft Crosstube - High 407



Part Weight: 0 lbs

Status: Scheduled

Priority: High

Job Created: 11/6/17

Job Tracking No:

Due Date: 12/8/17

Created By: Victoria Michaud-Febrille

Type: SOLD

Description:

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea		12/7/17	0.00	0.00	Start Up Stores/Pkg1		GP
110	Packaging	1 pcs		12/7/17	0.00	0.00	Packaging1		GP
120	CNC Bend Skid tubes	1 pcs		12/7/17	0.00	3.31	CNC Bend Skid tube		GP
130	QC	1 pcs		12/7/17	0.00	0.00	QC15		GP
140	Crosstubes	1 pcs		12/7/17	0.00	3.90	Crosstube		GP
150	HandFXtube	1 pcs		12/7/17	0.00	0.33	HandFinish5		GP
160	QC	1 pcs		12/7/17	0.00	0.00	QC7		GP
170	QC	1 pcs		12/7/17	0.00	0.00	QC5		GP
180	Outsource	1 pcs		12/7/17	0.00	0.00	Outsource2		GP
190	Packaging	1 pcs		12/7/17	0.00	0.00	Packaging2		GP
200	QC	1 pcs		12/7/17	0.00	0.00	QC5		GP
210	SprayPaint	1 pcs		12/7/17	0.00	0.73	Spray Paint		GP
220	QC	1 pcs		12/7/17	0.00	0.00	QC14		GP
230	Crosstubes	1 pcs		12/8/17	0.00	3.90	Crosstube		GP
240	QC	1 pcs		12/8/17	0.00	0.00	QC5		GP
250	Packaging	1 pcs		12/8/17	0.00	0.00	Packaging1		GP
260	QC	1 pcs		12/8/17	0.00	0.00	QC4		GP
265	DC	1 pcs		12/8/17	0.00	0.00	DC		GP
270	Packaging	1 pcs		12/8/17	0.00	0.00	Packaging3		GP
280	QC21-FG	1 Ea		12/8/17	0.00	0.00	QC21		GP

Part Op 120 - 1-Bend tube as per Dwg D407-667-245 using CNC bender program 407 and Folio 21
Descriptions: 140 - ***** ENSURE PROPER JIG POSITIONING BEFORE DRILLING***** VERIFIED BY: _____
pilot holes in tube using drill Jig DT8583 & DT8584 as per Dwg D407-667-245. Drill all (3) top holes. Holes facing inboard.
Drill and Ream all holes in tube to finish size using drill Jig DT8583 & DT8584 as per Dwg D407-667-245 ***** ENSURE
PROPER JIG POSITIONING BEFORE DRILLING***** VERIFIED BY: _____ ***** 2- Drill fwd rivet holes using
drill Jig DT8787 fwd as per Dwg D407-667-245. Note: FWD side has 3X top holes facing inboard. 3- C-sink holes as per
dwg D407-667-245. Allow rivet to sit below surface to compensate for paint. 4- Flip tube and switch drilling Jigs from right
to left, left to right. Locate Jigs off existing holes using "T" pins. Drill ONLY 2 top holes ONLY plug most bottom hole to
prevent accidental drilling. Drill holes and ream using drill Jig DT8583 & DT8584 as per Dwg D407-667-245. Drill only
the top (2) holes. Drill & ream the top (2) hole
150 - ***IMMEDIATELY AFTER GRINDING*** 1- PRESSURE WASH X-TUBE INSIDE AND OUT 2- ALODINE AND ACID
ETCH X-TUBE INSIDE AND OUT AS PER QSI005.
180 - *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** Liquid Penetrant Inspection as per QSI 0380
Issue P/O: 38543 LPI as per ASTM 1417 Level 2 Attach copy of NDT results to work order
190 - *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** Ensure copy of NDT results attached to work
order.
200 - *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE***

D407-667-205RLC/167710/5016113

DAS
13
9-89

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

210 - *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** 1-Prime inside and outside crosstube as per DEO D407-667-245 and QSI 005 4.2 PRIME: Start Time: _____ Finish Time: _____ ***Mask underside of crosstube as shown*** 2-Paint outside crosstube with White Imron as per QSI 005 4.2 PAINT: Start Time: _____ Finish Time: _____ 3- Apply clear coat as per dwg Clear Coat Batch: _____

220 - Then, Wrap in plastic bag to protect from scratches

230 - 1- Install chaffing shield as per D407-667-245 using DT10096 to establish 8.90 dimension. Top holes should be facing up. ****Ensure chaffing is to be position "overlap" AFT**** A/R Proseal 890 Batch: 138408 EXP: 3/18 2- Lightly scuff the bonded area using a 320 grit sand paper and clean the area with 41058 wash 'n' wipe 3-Install support with Scotch-Weld DP460 and install clamps as per DEO Dwg D407-667-245 using installation jig DT9025. Torque clamps as per dwg A/R Scotch-Weld DP460 Batch: M137679 EXP: 6/18 ***LET CURE FOR 24 HOURS*** CURE TIME: START: _____ FINISH: _____ 4-Install nut plates as per Dwg D407-667-245. Touch-up rivet heads with Imron paint.

240 - ***RE-CHECK TORQUE ON CLAMPS AFTER ADHESIVE HAS CURE FOR 24HOURS AS PER DWG DEO***

265 - Photocopy bluefile and create labels as per PPP D407-667-205 CHG009

270 - Identify and in kanban rack Location: _____

Job Allocations

| Operation | Component Part | Required | Inventory | Allocated | Std Qty |
|-----------------------|-------------------------------|--------------|-----------|-----------|---------|
| 90-Start up Operation | D2873-043 <u>5001319</u> | (2) | 113 | 0 | 0 |
| | D2873-045 <u>165660</u> | (2) | 37 | 0 | 0 |
| | D2894-1 <u>F149826</u> | (1) | 9 | 0 | 0 |
| | D3190-1 <u>138928</u> | (2) | 59 | 0 | 0 |
| | D3595-063-450 <u>F166074</u> | (2) | 94 | 0 | 0 |
| | D407-667-205TRN | 1 | 4 | 0 | 0 |
| | MS20601-AD4W8 <u>M138209</u> | 15 → 1 scrap | 387 | 0 | 0 |
| | MS21920-22 <u>5013763</u> | (4) | 26 | 0 | 0 |
| | MS21920-25 <u>M137588-165</u> | (2) | 179 | 0 | 0 |

B 162811

Part Specifications

Specifications could not be found.

Plex 11/6/17 9:30 AM dart.Michaud-Febrille.Victoria

DART
AEROSPACE
S016113



Aft Crosstube – High 407

Dart Aerospace Ltd.

1270 Aberdeen Street
Hawkesbury, ON K64 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

PART NO: D407 – 667 – 205RLC
Revision:
Operation: Start up Operation
Change No:

Mfg Date: 11/30/17

Job No: 167710

| Item | QTY | PART NUMBER | DESCRIPTION |
|------|------|-------------------|-----------------------------------|
| | -245 | | |
| | X | D407-667-245 | CROSSTUBE ASSEMBLY (407 HIGH AFT) |
| 1 | 1 | D6011-115 | CROSSTUBE |
| 2 | 2 | D2873-043 | NUT PLATE |
| 3 | 2 | D2873-045 | NUT PLATE |
| 4 | 1 | D2894-1 | SUPPORT |
| 5 | 2 | D3190-1 | CHAFING SHIELD |
| 6 | 2 | D3595-063-430 | RUBBER CUSHION |
| 7 | 14 | MS20601AD4W8 | RIVET (OR NAS9302B-4-8) |
| 8 | 4 | MS21920-22 | CLAMP |
| 9 | 2 | MS21920-25 | CLAMP (OR MS21920-24) |
| 10 | AR | SCOTCH-WELD DP460 | EPOXY ADHESIVE, 3M SCOTCH-WELD |
| 11 | AR | PROSEAL 890 | SEALANT |

GENERAL NOTES:

- MATERIAL: MANUFACTURED FROM D6011-115
FINISHED LENGTH = 112.91±0.020
- FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT CROSSTUBE PER DART QSI 005 4.2
FOR HATCHED AREAS (ZN A6-2), MASK AS REQUIRED
TO APPLY PRIME AND APPLY CLEAR COAT ONLY
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- UNITS: INCHES UNLESS OTHERWISE NOTED.
- BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- IDENTIFICATION: SCRIBE DART PART NUMBER "D407-667-245" AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS.
- WEIGHT: 27.7 lbs
- PART IS SYMMETRIC ABOUT CENTERLINE.
- RUN-OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- BEND PROGRESSIVELY WITH A MINIMUM OF 6 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- INSTALL D2894-1 CENTER SUPPORT USING A 0.04" TO 0.07" THICK LAYER OF SCOTCH-WELD DP460 PER QSI 015. LET CURE FOR 24 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- INSTALL MS21920-25 CLAMPS WITH D3595-063-430 RUBBER CUSHIONS TO SECURE D2894-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE CROSSTUBE SUPPORT.
NOTE: MS21920-24 CLAMPS CAN BE USED TO ACCOMMODATE VARYING DIAMETERS. ENSURE THERE IS A MINIMUM OF 1.5 THREADS IN SAFETY ON THE NUTS.
- EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- APPLY A THIN COAT OF PROSEAL 890 ON INSIDE CONCAVE SURFACE OF D3190-1 CHAFING SHIELDS AND LET CURE PER MANUFACTURER'S INSTRUCTIONS. INSTALL PROSEAL D3190-1 CHAFING SHIELDS ONTO CROSSTUBE BY APPLYING A THIN COAT OF PROSEAL 890 ONTO CROSSTUBE. BE SURE TO ELIMINATE ANY AIR GAPS.
- INSTALL D3190-1 CHAFING SHIELDS SO THAT OVERLAP IS 50 TO 70 DEGREES FROM BOTTOM OF CROSSTUBE OPPOSITE D2894-1 SUPPORT.
- TORQUE CLAMPS 80 TO 100 IN-LB. TORQUE CLAMPS ON D3190-1 CHAFING SHIELD 40 TO 50 IN-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING. PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER ADHESIVE HAS CURED FOR 24 HOURS.

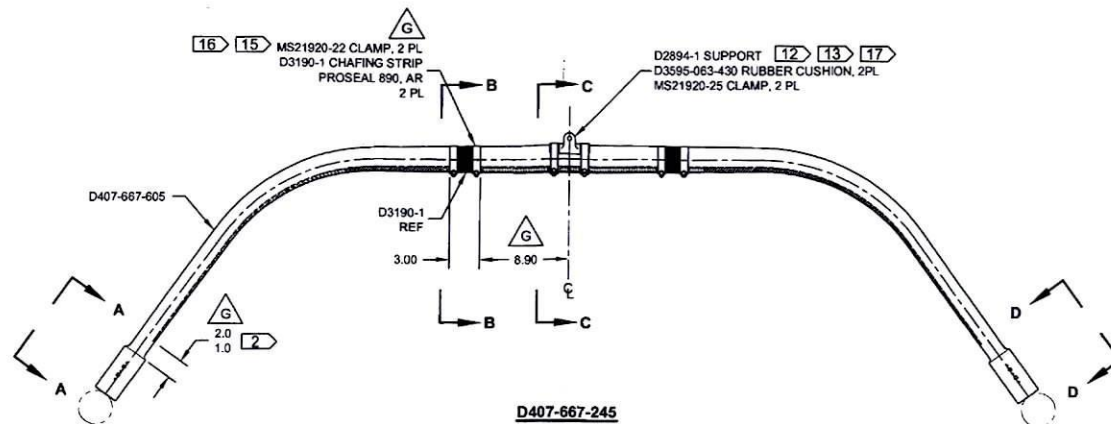
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RETURN TO
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WORK ORDER
NO. 167710

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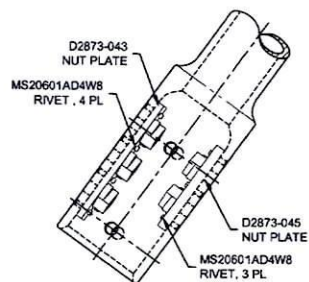
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9 ECN 15-557

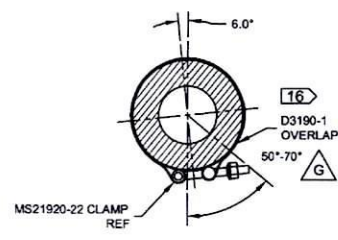
| | | | |
|--|--|----|----------|
| G | INCORP. DEO'S D407-667-245-F1/F2 (ZN D8-1, A8-1, D5-2, B6-2, C6-2); 8.90 WAS 8.53 (ZN D5-2); TORQUE REDUCED FOR CHAFING SHIELD (ZN A8-1); FINISH REVISED TO ALLOW MANUFAC. FLEXIBILITY (ZN C8-1) | RF | 15.03.20 |
| F | REFORMAT NOTES TO NEW STANDARDS (ZN B8-1); RELOCATED FLAG # 6 (ZN A8-3) PER NCR 210, REMOVED REF. & ADD TOLERANCES (ZN C6-3, C4-3 & D2-3) | RF | 08.11.06 |
| E | 8.02 AND 8.53 WERE 8.40 AND 8.90 (ZN D5-2); REORGANIZED VIEWS AND REFORMATED DRAWING TO CURRENT STANDARDS. REASONS: CLAMPS MOVED 0.375 TOWARD CL TO ELIMINATE INTERFERENCE WITH AIRCRAFT MOUNTS. REFERENCE: PAR#08-21 AND ECN#1225 | MB | 08.07.24 |
| D | ADD VIEW FOR OEM SKID HOLES, ROTATE ORIENTATION OF CLAMPS SECTION F-F, REMOVE -851 ABRASION STRIP, ADD MAGNOBOND 6398, ADD CUSHION | PH | 07.02.07 |
| C | ADD HOLES AND NUT PLATES FOR COMPATIBILITY WITH BHT/AA SKIDTUBES | PH | 05.07.26 |
| B | ADD CHAFING SHIELD | CP | 03.05.21 |
| A | NEW ISSUE | CP | 02.05.13 |
| REV. | DESCRIPTION | BY | DATE |
| DESIGN | RF | | |
| DRAWN | RF | | |
| CHECKED | RF | | |
| MFG. APPR. | RF | | |
| APPROVED | RF | | |
| DE APPR. | RF | | |
| DATE | 15.03.20 | | |
| DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA
DRAWING NO. D407-667-245
TITLE CROSSTUBE ASS'Y (407 HIGH AFT)
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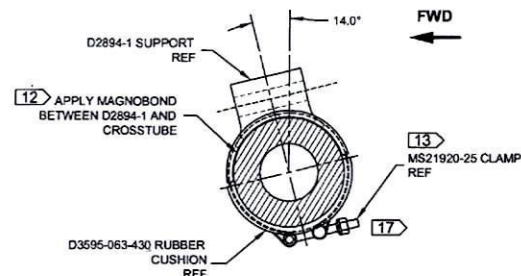
**D407-667-245
ASSEMBLY DETAIL
(VIEW LOOKING FWD)**



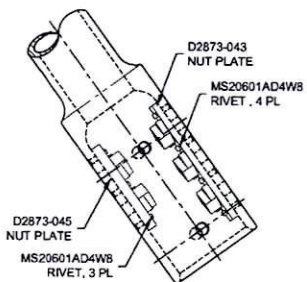
**VIEW A-A CUFF DETAIL
SCALE 4X**



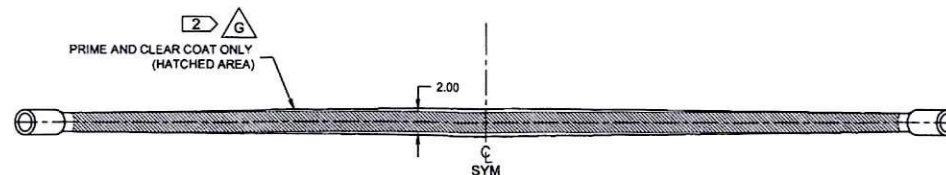
**SECTION B-B
SCALE 4X, 2PL**



**SECTION C-C
SCALE 4X**

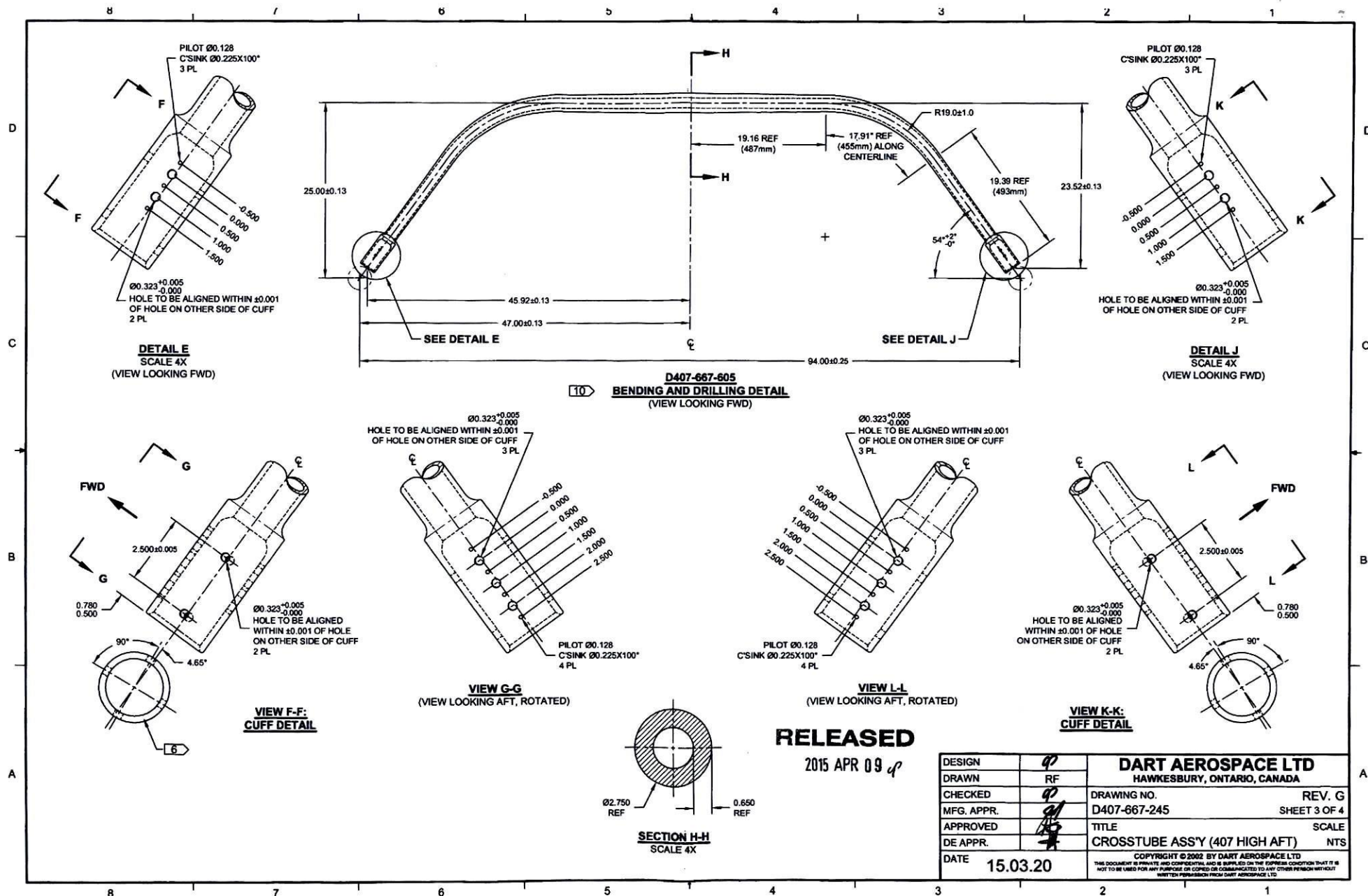


**VIEW D-D CUFF DETAIL
SCALE 4X**



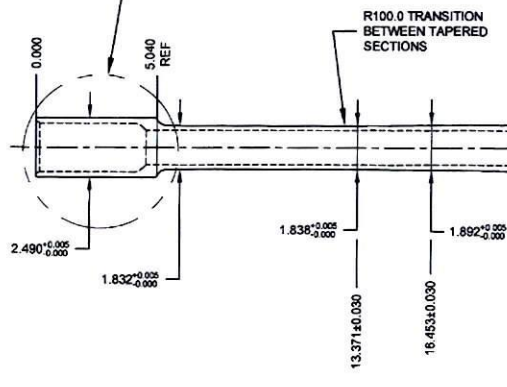
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2015 APR 09

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| DESIGN | Q | DART AEROSPACE LTD | |
| DRAWN | RF | HAWKESBURY, ONTARIO, CANADA | |
| CHECKED | Q | DRAWING NO. | REV. G |
| MFG. APPR. | RF | D407-667-245 | SHEET 2 OF 4 |
| APPROVED | RF | TITLE | SCALE |
| DE APPR. | RF | CROSSTUBE ASSY (407 HIGH AFT) | NTS |
| DATE | 15.03.20 | COPYRIGHT © 2002 BY DART AEROSPACE LTD | |
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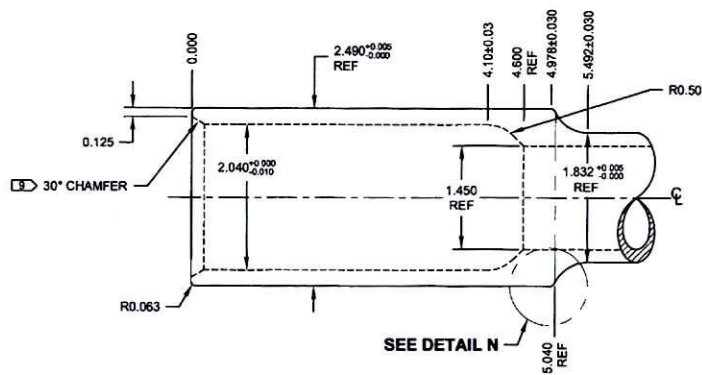


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|---|----------|--|--------------|
| DESIGN | Q | DART AEROSPACE LTD | |
| DRAWN | RF | HAWKESBURY, ONTARIO, CANADA | |
| CHECKED | Q | DRAWING NO. | REV. G |
| MFG. APPR. | Q | D407-667-245 | SHEET 3 OF 4 |
| APPROVED | Q | TITLE | SCALE |
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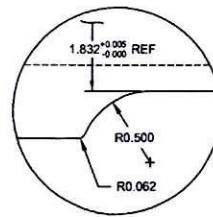
SEE DETAIL M



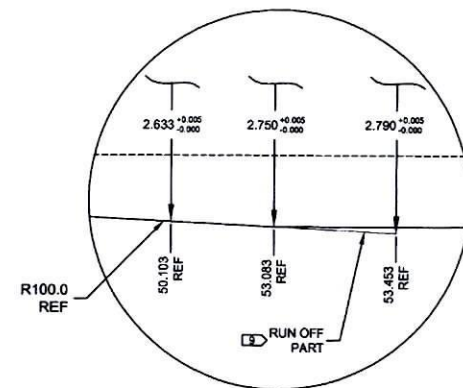
D407-667-245 MACHINING DETAIL



DETAIL M: CROSSTUBE CUFF
SCALE 3X



DETAIL N: CUFF TRANSITION
SCALE 2X



DETAIL P: TAPER RUN-OFF
NOT TO SCALE

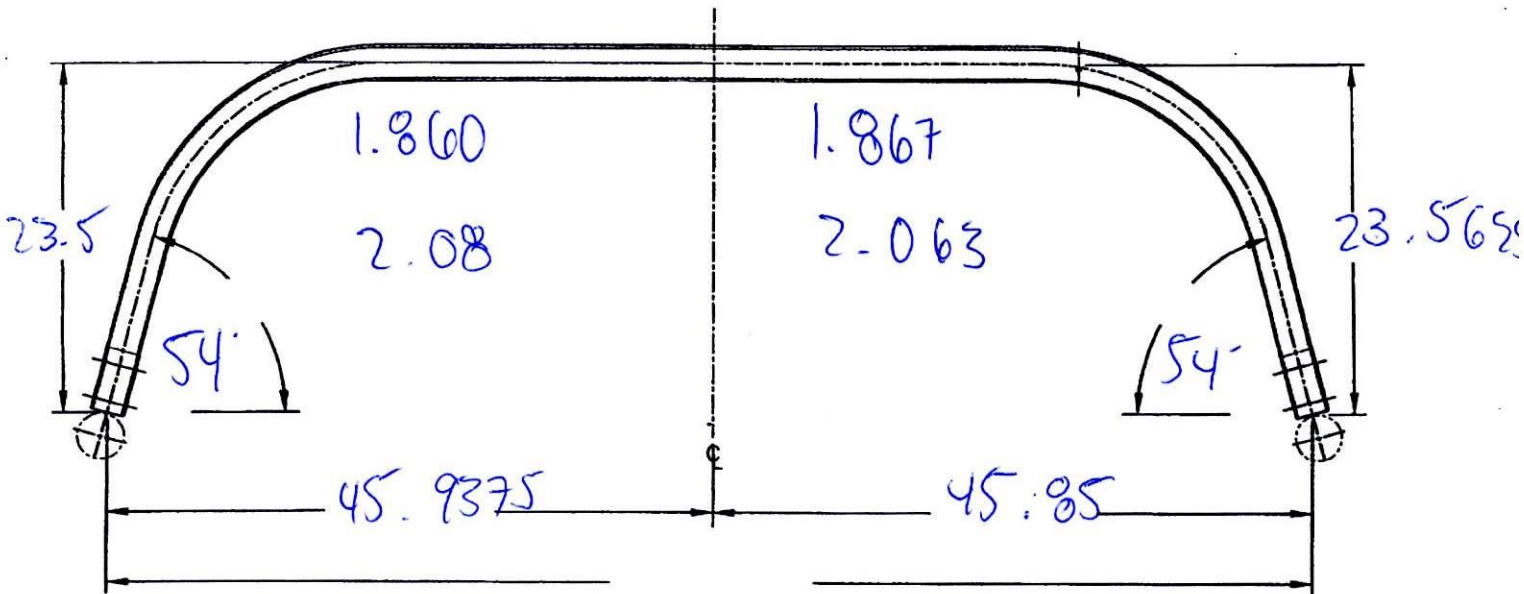
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2015 APR 09

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| DESIGN | 4P | DART AEROSPACE LTD | |
| DRAWN | RF | HAWKESBURY, ONTARIO, CANADA | |
| CHECKED | 4P | DRAWING NO. | REV. G |
| MFG. APPR. | 4P | D407-667-245 | SHEET 4 OF 4 |
| APPROVED | 4P | TITLE | SCALE |
| DE APPR. | 4P | CROSSTUBE ASS'Y (407 HIGH AFT) | NTS |
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| | | |
|---|---------------------|---------------------|
| DART AEROSPACE LTD | Work Order: | |
| Description: Crosstube High Aft (407) | Part Number: | D407-667-205 |
| Inspection Dwg: D407-667-245 Rev: G | | Page 1 of 1 |

| Required Dimension | Min | Max |
|--------------------|-------|--------|
| Height | 23.39 | 23.65 |
| 1/2 Span | 45.79 | 46.05 |
| Angle | 54 | 56 |
| Total Span | 91.58 | 92.100 |
| Bending Passes | 6 | -- |
| Crushing | -- | 6% |



| | Side A | Side B |
|-----------------------|--------|--------|
| Bending Passes | 2.8 | 2.8 |
| Crushing | 5.6% | 5.7% |
| Comments | | |
| | | |
| | | |
| | | |
| | | |

DAS
47

| | |
|-----------------|----------|
| QC15 Inspection | 9-89 |
| Date | 17-11-30 |

| Rev | Date | Change | Revised by | Approved |
|-----|----------|------------------------------------|------------|----------|
| A | 07.02.06 | New Issue | KJ/JM | |
| B | 09.06.22 | Dwg Rev updated | KJ | |
| C | 11.08.22 | Dimensions updated | KJ | |
| D | 11.09.30 | Dimensions updated | KJ | |
| E | 12.04.16 | Added bending, crushing dimensions | KJ | |
| F | 15.05.14 | Dwg Rev updated | KJ | |

**skyservice****Work Order Traveler**
Sky Service F.B.O. Inc.

10105 Ryan Avenue, Dorval, Quebec, H9P 1A2

TCCA AMO 53-89 / EASA 145.7142 / BDA AMO 385

| | | | |
|--------------------------|--------------------------------------|----------------------|----------------------------|
| WO #: MWO34256 | Customer: Dart Aerospace Ltd. | Dept: NDT YUL | Reference: PO038543 |
| Descr: | PN: | S/N: | Qty: 1 |
| Make: | Model: | Reg: | A/C S/N: |
| TSN: | CSN: | TSO: | |
| Task: UNSCHEDULED | | | Sequence: 1 |

Work Required:

CARRY OUT NDT ON 8 CROSSTUBES AS PER PO038543

1 AFT CROSSTUB , P/N# D407-667-205RLC , J/S# 167710

3 AFT CROSSTUBES , P/N# D407-667-205 , J/S# 162554, 168984, 168932

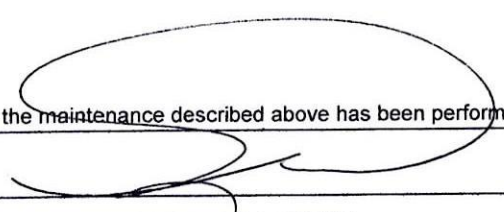
4 FWD CROSSTUBES , P/N# D407-667-105 , J/S# 164067, 164202, 164199, 164200

| Action Taken: | | | | | | Date: | Initial/Stamp: |
|--|----------|-----|-----|-------|---------|--------------|---|
| LPI C/O IAW ASTM E-1417M-13

NO CRACK FOUND

PEN. ZL-56, MPO13600, CLEANER SKC-S MPO13923 , DEV. MPO11715 , UV LIGHT M-20142 | | | | | | DEC 04 2017 | 
 |
| Description | Location | P/N | Qty | Batch | S/N Off | S/N On | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

I certified that the maintenance described above has been performed in accordance with the applicable standard of airworthiness.

| | | |
|---|---|-----------------------------|
| Signature:  | ACA/SCA Stamp
 | Date:
DEC 04 2017 |
| Name: RAFIK MELIKIAN | | |



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO038543**

Supplier: SKY002-VC
Skyservice
6120 Midfield Road
Mississauga
ON
L5P 1B1 Canada
Phone: 905-678-5636
Fax: 905-678-5841

PO No: PO038543
PO Date: 12/4/17
Due Date: 12/6/17
Purchase Order Revision:
Revision Date:
Ship-To Contact: Lavoie, Chantal
clavoie@dartaero.com

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pymt Terms: Net 30
Freight Terms:
Special Comments:

Items

| Line Item | Job | Part | Description | Status | Due Date | Order Quantity | Received Quantity | Balance | Unit Price (CAD) | Extended Price |
|-----------|--------|-----------------|---|--------|----------|----------------|-------------------|---------|------------------|----------------|
| 1 | 164067 | D407-667-105 | Fwd Crosstube - High 407
*** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE***
OUTSIDE SERVICE - CROSSTUBES Liquid Penetrant Inspection as per QSI 038 Or Level 2
Attach copy of NDT results to work order | Firmed | 12/6/17 | 1 pcs | 0 pcs | 1 pcs | \$131.875/pcs | \$131.88 |
| 2 | 164202 | D407-667-105 | Fwd Crosstube - High 407
*** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE***
OUTSIDE SERVICE - CROSSTUBES Liquid Penetrant Inspection as per QSI 038 Or Level 2
Attach copy of NDT results to work order | Firmed | 12/6/17 | 1 pcs | 0 pcs | 1 pcs | \$137.875/pcs | \$137.88 |
| 3 | 164199 | D407-667-105 | Fwd Crosstube - High 407
*** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE***
OUTSIDE SERVICE - CROSSTUBES Liquid Penetrant Inspection as per QSI 038 Or Level 2
Attach copy of NDT results to work order | Firmed | 12/6/17 | 1 pcs | 0 pcs | 1 pcs | \$131.875/pcs | \$131.88 |
| 4 | 164200 | D407-667-105 | Fwd Crosstube - High 407
*** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE***
OUTSIDE SERVICE - CROSSTUBES Liquid Penetrant Inspection as per QSI 038 Or Level 2
Attach copy of NDT results to work order | Firmed | 12/6/17 | 1 pcs | 0 pcs | 1 pcs | \$131.875/pcs | \$131.88 |
| 5 | 167710 | D407-667-205RLC | Aft Crosstube - High 407
*** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** Liquid Penetrant Inspection as per QSI 038O Issue P/O: _____ LPI as per ASTM 1417 Level 2 Attach copy of NDT results to work order | Firmed | 12/6/17 | 1 pcs | 0 pcs | 1 pcs | \$131.875/pcs | \$131.88 |

Plex 12/5/17 10:02 AM dart.lavoie.chanta

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: DA Date: FEB - 9 2018Work Order update only ☐

| | | | | | | | |
|---|--|---|--|---|--|---|--|
| Work Order: <u>167710</u>
Part No. <u>D407-667-205ALL</u>
NCR No. <u>18-6760</u> | | DISPOSITION
Rework ☐
Scrap ☐
Use-as-is ☒
Suspected Unapproved ☐ | | AGAINST DEPARTMENT/PROCESS
Skid-tube ☐ Cross tube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coord. ☐ Quality ☐
Thermoforming ☐ Finishing ☒ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐ | | | |
| Date: <u>17-12-08</u> | | Step #: <u>230</u> | | QTY Effective: <u>1</u> | | MRB (QSI042) Approval
DAS 12 9-89 <u>17/12/08</u> | |
| Description Work Order Deviation | | | | Disposition | | Completed By
DAS 12 9-89 <u>17/12/08</u> | |
| Clamp suppose too be at 8.90
and its sitting down at 8.00
operator put it
between center suport and clamp | | | | Checked with 407 rocker
beam. Beam contacts on
chafing shield - So Acceptable. | | Lead hand / Supervisor
Approval Verification
<u>RB</u>
<u>17-12-08</u> | |
| | | | | | | QC / QA Coordinator
Approval
<u>RB</u>
<u>17-12-08</u> | |
| Root Cause
Environment ☐ No Re-verification ☐
Design ☐ Operator ☒
Doc/Data ☐ Offset/Setup ☐
Equip/Tooling ☐ Supplier ☐
Handling/Pre ☐ Training ☐
Material ☐ Use for Testing ☐
Internal Transport ☐ Poor Information ☐
Tribal Knowledge ☐ Rushing ☐
LOA ☐ Product Improvement ☐
Substation ☐ Process Improvement ☐
Past Expiry Date ☐ Manufacturing Process ☐
Misidentified ☐ Past Due ☐ | | | | FAULT CATEGORY
Pressure/Forced ☐ Temperature/Cure ☐ Power Loss/Surge ☐ ☒ Positioned Wrong
Bending ☐ Set-up ☐ Folio/Program ☐ Outside Dimensions
Centre Not Concentric ☐ BOM/Route ☐ Grain ☐ Over/Under tolerance
Cracks ☐ Broken/Damage/Defect ☐ Weld ☐ Part Incorrect
Crimp/Kink/Ripple/Wave ☐ Inspection Incomplete/Unqualified ☐ Wrong Stock Pulled ☐ Part Lost/Missing
Cuffs ☐ Contamination ☐ Out of Sequence ☐ ☒ Part Moved
Crushing ☐ Countersink ☐ Off-set ☐ <u>3</u> Drawing
Heat Treat ☐ ☒ Cut Too Short ☐ Mislabeled ☐ Finish
Wave/Twist in Tube ☐ Instructions Incomplete <u>Unclear</u> ☐ Fit/Function ☐ Misread
Marks/Chatter ☐ Drill Holes ☐ Misaligned/off center ☐ Turning Sequence | | | |
| OTHER: _____ | | | | | | | |